

**IN THE ABSTRACT:**

Please DELETE the Abstract in its entirety and substitute the following new Abstract:

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C2 An apparatus for and a method of operating an automation system. A processing unit subjects useful information which is received via a telegram to a user designated logic operation and drives an output channel in accordance with a result of the logic operation. The processing unit monitors a time sequence of process data transmitted with the useful information and drives the output channel only when the time sequence lies within predetermined tolerances. A monitoring unit monitors the processing unit and shifts the output channel to a safe condition as soon as a malfunction of the processing unit is detected. The output channel may include a readback channel which reads back a signal applied to the output channel whereby the monitoring unit compares the applied signal and the readback signal and shifts the output channel to a safe state if the applied signal and the readback signal differ.

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